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Features of phase formation and phase distribution in the dehydration of coarse gibbsite floccules

Egorova S., Lamberov A.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2014 Pleiades Publishing, Ltd. A complex study of the phase composition and phase distribution in coarse floccules of the dehydration products of gibbsite thermally treated at atmospheric pressure in air at 250-500°C was performed. The dehydration of gibbsite floccules generates coarsely and finely crystalline boehmite phases. Finely crystalline boehmite is formed by partial "fragmentation" of gibbsite crystals. The layer of coarse boehmite crystals surrounds a finely crystalline boehmite core. χ-Al2O3 predominantly crystallizes on the outer surface of gibbsite particles that contacts with the environment.

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Keywords

alumina, boehmite, dehydration, floccule, gibbsite